Collection of Materials Related to the Pilgrim Nuclear Power Station License Renewal Application Review, 2006

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LICENSE RENEWAL
Safety Evaluation Report
September 2007

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Pilgrim Nuclear Power Station
ML 072210487
Docket No.: 50-293

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DEC 11 2007

September 7, 2007

LICENSEE: Entergy Nuclear Operations, Inc.

FACILITY: Pilgrim Nuclear Power Station

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON AUGUST 30, 2007, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND ENTERGY NUCLEAR OPERATIONS, INC., COMMITMENT NO. 47 PERTAINING TO THE PILGRIM NUCLEAR POWER STATION LICENSE RENEWAL APPLICATION

The U.S. Nuclear Regulatory Commission and representatives of Entergy Nuclear Operations, Inc., held a telephone conference call on August 30, 2007, to discuss and clarify Commitment No. 47 of the Pilgrim Nuclear Power Station license renewal application. The telephone conference call was useful in discussing possible Commitment No. 47 related action plans.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a summary of the discussion with the applicant, including a brief description on the status of the items.

The applicant had an opportunity to comment on this summary.

Perry Buckberg, Project Manager
License Renewal Branch A
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-293

Enclosures:
As stated

cc w/encls: See next page

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TELEPHONE CONFERENCE CALL
PILGRIM NUCLEAR POWER STATION
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
AUGUST 30, 2007

PARTICIPANTS	AFFILIATIONS
Perry Buckberg	U.S. Nuclear Regulatory Commission (NRC)
Lambros Lois	NRC
Fred Mogolesko	Entergy Nuclear Operations, Inc. (Entergy)
Edward Sanchez	Entergy
Ray Pace	Entergy

Enclosure 1

TELEPHONE CONFERENCE CALL
PILGRIM NUCLEAR POWER STATION
LICENSE RENEWAL APPLICATION

AUGUST 30, 2007

The U.S. Nuclear Regulatory Commission and representatives of Entergy Nuclear Operations, Inc. (Entergy), held a telephone conference call on August 30, 2007, to discuss and clarify the Commitment No. 47 action plan of the Pilgrim Nuclear Power Station license renewal application.

Discussion: During the discussion with the applicant, the staff indicated that the August 23, 2007, Entergy letter delivered to satisfy this Commitment, requires further discussion. The applicant agreed to additional discussions regarding the action plan.

Enclosure 2

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 31, 2007

LICENSEE: Entergy Nuclear Operations, Inc.

FACILITY: Pilgrim Nuclear Power Station

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALLS HELD ON AUGUST 23, 2007 AND AUGUST 27, 2007, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND ENTERGY NUCLEAR OPERATIONS, INC., CONCERNING REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE PILGRIM NUCLEAR POWER STATION, LICENSE RENEWAL APPLICATION

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Entergy Nuclear Operations, Inc., held telephone conference calls on August 23, 2007 and August 27, 2007, to discuss and clarify the staff's requests for additional information (RAIs) concerning the Pilgrim Nuclear Power Station, license renewal application. The telephone conference calls were useful in clarifying the intent of the staff's RAIs.

Enclosure 1 provides a listing of the participants and Enclosure 2 contain the RAI discussed with the applicant, including a brief description on the status.

The applicant had an opportunity to comment on this summary.

Perry Buckberg, Project Manager
License Renewal Branch A
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-293

Enclosures:
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TELEPHONE CONFERENCE CALL
PILGRIM NUCLEAR POWER STATION
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
AUGUST 23, 2007 AND AUGUST 27, 2007

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Pao-Tsin Kuo	U.S. Nuclear Regulatory Commission (NRC)
Kenneth Chang	NRC
Louise Lund	NRC
Perry Buckberg	NRC
Peter Wen	NRC
James Medoff	NRC
Gary Young	Entergy Nuclear Operations, Inc. (Entergy)
Steve Bethay	Entergy
Bryan Ford	Entergy
Fred Mogolesko	Entergy
Edward Sanchez	Entergy
Alan Cox	Entergy
Rick Plasse	Entergy
David Mannai	Entergy

Enclosure 1

REQUESTS FOR ADDITIONAL INFORMATION
PILGRIM NUCLEAR POWER STATION
LICENSE RENEWAL APPLICATION

AUGUST 23, 2007 AND AUGUST 27, 2007

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Entergy Nuclear Operations, Inc. held telephone conference calls on August 23 and August 27, 2007, to discuss and clarify the following request for additional information (RAI) concerning the Pilgrim Nuclear Power Station, license renewal application.

RAI # 4.3.3-1

The license renewal application (LRA) for the Pilgrim Nuclear Power Station listed several reactor coolant pressure boundary components that did not receive a plant-specific metal fatigue analysis and cumulative usage factor (CUF). The applicant generated LRA Commitment No. 31 to address this issue. In the commitment, the applicant committed to take one of the following options or a combination of options to ensure that the time-limited aging analysis (TLAA) on environmentally-assisted fatigue (EAF) of these components, and any other Class 1 components requiring reanalysis for EAF, will be acceptable under 10 CFR 54.21(c)(1) for the period of extended operation:

> Option (1): either refine the existing fatigue analyses or perform new fatigue analyses using at least one of four suboptions under this option.
>
> Option (2): manage aging using an aging management program for the period of extended operation.
>
> Option (3): repair or replace the impacted component prior to exceeding a CUF of 1.0.

In order to make a determination on the acceptability of the applicant's TLAA on EAF under the requirements of 10 CFR 54.21(c)(1), the staff requests that the applicant provide additional information on the option(s) that will be used for LRA Commitment No. 31. The applicant is requested to describe the methodology that will be used for the chosen option(s) in detail sufficient for staff review. Specifically, the staff requests that:

A. If Option (1) is chosen, describe the methodology and the process that will be used to ensure that assumptions, transients, cycles, external loadings, F_{en} values, and analysis methods are valid for the refined or new fatigue analyses.

   In the event the refined analyses performed under Option (1) result in CUFs greater than 1.0, describe the option(s) that may be used in addition to Option (1).

B. If Option (2) is chosen, describe the AMP in sufficient detail with regard to inspection scope, inspection methods, inspection frequency, and inspection qualification techniques.

C. If Option (3) is chosen, describe how the repair or replacement activity will be implemented in accordance with applicable repair or replacement requirements of the ASME Code Section XI.

Discussion: On August 23, 2007, the staff indicated that the response to this RAI requires clarification. The applicant concurred with the staff's assessment and discussed a new approach to answering the RAI. On August 27, 2007, the applicant described a new response to the RAI that would be submitted to the staff.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 27, 2007

Mr. Michael A. Balduzzi
Sr. Vice President & COO
Regional Operations, NE
Entergy Nuclear Operations
440 Hamilton Avenue
White Plains, NY 10601-1839

SUBJECT: SUPPLEMENTAL SAFETY EVALUATION REPORT RELATED TO THE LICENSE RENEWAL OF PILGRIM NUCLEAR POWER STATION

Dear Mr. Balduzzi:

By letter dated January 25, 2006, Entergy Nuclear Operations, Inc. (Entergy), submitted for the U.S. Nuclear Regulatory Commission (NRC) review, an application to renew the Pilgrim Nuclear Power Station (PNPS) operating license for up to an additional 20 years. The license renewal application (LRA) was submitted pursuant to Title 10 of the *Code of Federal Regulations* Part 54, "Requirements for Renewal of Operating Licenses for Nuclear Power Plants." The NRC staff determined that the LRA was complete and acceptable for docketing on March 21, 2006. Since that time, the staff has issued a safety evaluation report (SER) with open items dated March 1, 2007, and issued a final SER on June 28, 2007.

In a letter dated July 26, 2007, the NRC staff requested the applicant provide additional information on the option(s) that will be used for LRA Commitment No. 31, which is discussed in SER Section 4.3.3 (Effects of Reactor Water Environment on Fatigue Life), and to describe the methodology that will be used for the chosen Commitment No. 31 option(s). On the basis of this request, and the Entergy response, in the form of LRA Amendment 19, the staff has developed the enclosed supplemental SER (SSER) to document its findings associated with the safety review of the amended LRA and supporting documentation for PNPS. The enclosed SSER supercedes and replaces SER Sections 3.0.3.2.9 and 4.3.3.

If you have any questions regarding this matter, please contact the license renewal project manager, Mr. Perry Buckberg at (301) 415-1383 or by via e-mail PHB1@nrc.gov.

Sincerely,

Pao-Tsin Kuo, Director
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-293

Enclosure:
Safety Evaluation Report

cc w/encl: See next page

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